LISTING OF THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A process for producing a transgenic plant, whose seeds have an increased amount of reserve material in comparison with a wild-type plant due to the reduction or elimination of the expression of an endogenous invertase inhibitor protein during the development of seeds so that the activity of invertase, which is subject to a regulation by the invertase inhibitor protein, is increased during the development of seeds leading to an increased accumulation of reserve material in the seed, comprising the steps of:

(a) obtaining a nucleotide sequence expressed during seed development in flowers with young ovules, wherein the nucleotide sequence expressed during said seed development is a nucleotide sequence coding for the endogenous apoplastic invertase inhibitor protein ~~or a nucleotide sequence having a sequence identity of 80% or more to said nucleotide sequence coding the endogenous apoplastic invertase inhibitor protein~~;

(b) inserting the DNA nucleotide sequence in a DNA construct in sense orientation next to a promoter as a regulatory unit;

(c) transforming a plant cell ~~of a plant~~ of the same plant species[[,]] from which the nucleotide sequence was obtained, with the DNA construct; and

(d) cultivating the plant cell and regenerating a plant, wherein the expression of the endogenous invertase inhibitor protein is reduced or eliminated during seed development.

2. (Canceled)

3. (Previously Presented) The process according to claim 1, wherein the nucleotide sequence coding for the endogenous apoplastic invertase inhibitor protein is a cDNA, obtained by the following steps:

(a) separating and purifying an inhibitor protein fraction from the cell wall protein fraction of flowers with young ovules of a plant;

(b) digesting the inhibitor protein and separation of the resulting peptides;

(c) sequencing the peptides in order to obtain the amino acid sequences;

(d) deriving nucleotide sequences from the amino acid sequences and designing of primers; and

(e) cloning a partial or full-length cDNA coding the endogenous apoplastic invertase inhibitor protein from a cDNA library from flowers with young ovules of said plant or alternatively synthesizing the partial or full-length cDNA using the primers.

4. (Previously Presented) The process according to claim 1, in which the promoter is a constitutive or inducible promoter.

5. (Previously Presented) The process according to claim 4, in which the promoter is selected from the group consisting of CaMV35S promoter, ubiquitin promoter, and zein promoter from corn.

6. (Canceled)

7. (Canceled)

8. (Previously Presented) The process according to claim 1, in which the DNA construct has additional regulatory units.

9. (Previously Presented) The process according to claim 8, in which an additional regulatory unit is a transcription termination signal.

10. (Previously Presented) The process according to claim 9, in which the transcription termination signal comes from a NOS gene of *Agrobacterium tumefaciens*.

11. (Previously Presented) The process according to claim 1, in which the plant cell is a cell of a dicotyledonous or monocotyledonous plant.

12. (Previously Presented) The process according to claim 11, in which the plant cell is from a plant selected from the group consisting of rape, sunflower, peanut, soy bean, oil palm,

rice, corn, wheat, barley, oats, rye, pea, Calendula officinalis, Coriandrum sativum, Crambe abyssinica, Cuphea ssp., Dimorphotheca pluvialis, Euphorbia lagascae, Euphorbia lathyris, Lesquerella grandiflora, Limnanthes alba, Linum usitatissimum, Lunaria annua, Lunaria biennis, Oenothera ssp., Ricinus communis and Simmondsia chinensis.

13. (Previously Presented) The process according to claim 1, in which the DNA construct is in a vector.

14. (Previously Presented) The process according to claim 13, in which the vector is a plasmid or a virus.

15. (Previously Presented) The process according to claim 1, in which the transformation of the plant cell is carried out by an Agrobacterium tumefaciens-mediated transformation or a biolytic process comprising a step selected from the group consisting of electrically induced DNA absorption, chemically induced DNA absorption, electroporation, macroinjection, microinjection and PEG-mediated transformation.

16. (Currently Amended) A process for producing a transgenic plant, whose seeds have an increased amount of reserve material in comparison with a wild-type plant due to the reduction or elimination of the expression of an endogenous invertase inhibitor protein during the development of seeds so that the activity of invertase, which is subject to a regulation by the invertase inhibitor protein, is increased during the development of seeds leading to an increased accumulation of reserve material in the seed, said process comprising the steps of:

(a) obtaining a nucleotide sequence expressed during seed development in flowers with young ovules, wherein the nucleotide sequence expressed during said seed development is a nucleotide sequence of a gene for the endogenous apoplastic invertase inhibitor protein ~~or a nucleotide sequence having a sequence identity of 80 % or more to said nucleotide sequence of said gene of the endogeneous apoplastic invertase inhibitor protein~~;

(b) inserting the DNA nucleotide sequence in a DNA construct in sense and anti-sense orientation next to a promoter as a regulatory unit, so as to obtain a double-stranded RNA and/or inverted repeat RNA of the endogenous invertase inhibitor gene;

(c) transforming a plant cell ~~of a plant~~ of the same plant species [[,]] from which the nucleotide sequence was obtained, with the DNA construct, and

(d) cultivating the plant cell and regenerating a plant, wherein the expression of the endogenous invertase inhibitor protein is reduced or eliminated during seed development.

17. (Previously Presented) The process according to claim 16, wherein the DNA construct encodes a single-self complementary hairpin RNA of the endogenous invertase inhibitor gene.

18. (Previously Presented) The process according to claim 16, wherein the DNA construct comprises one copy of the nucleotide sequence of the endogenous invertase inhibitor gene in sense orientation and another copy in anti-sense orientation.

19. (Previously Presented) The process according to claim 18, wherein the two copies flank a spacer fragment which is non-homologous to the nucleotide sequence used.

20. (Previously Presented) The process according to claim 16, wherein the nucleotide sequence of the endogenous apoplastic invertase inhibitor protein is a cDNA, obtained by the following steps:

(a) separating and purifying an inhibitor protein fraction from the cell wall protein fraction of flowers with young ovules of a plant;

(b) digesting the inhibitor protein and separation of the resulting peptides;

(c) sequencing the peptides in order to obtain the amino acid sequences;

(d) deriving nucleotide sequences from the amino acid sequences and designing primers; and

(e) cloning a partial or full-length cDNA coding the apoplastic invertase inhibitor protein from a cDNA library from flowers with young ovules of said plant or alternatively synthesizing the partial or full-length cDNA using the primers.

21. (Previously Presented) The process according to claim 16, in which the promoter is a constitutive or inducible promoter.

22. (Previously Presented) The process according to claim 21, in which the promoter is selected from the group consisting of CaMV35S promoter, ubiquitin promoter, and zein promoter from corn.

23. (Previously Presented) The process according to claim 16, in which the DNA construct further comprises at least one additional regulatory unit.

24. (Previously Presented) The process according to claim 23, in which at least one said additional regulatory unit is a transcription termination signal.

25. (Previously Presented) The process according to claim 24, in which the transcription termination signal comes from the NOS gene of *Agrobacterium tumefaciens.*

26. (Previously Presented) The process according to claim 16, in which the plant cell is a cell of a dicotyledonous or monocotyledonous plant.

27. (Previously Presented) The process according to claim 26, in which the plant cell is from a plant selected from the group consisting of rape, sunflower, peanut, soy bean, oil palm, rice, corn, wheat, barley, oats, rye, pea, Calendula officinalis, Coriandrum sativum, Crambe abyssinica, Cuphea ssp., Dimorphotheca pluvialis, Euphorbia lagascae, Euphorbia lathyris, Lesquerella grandiflora, Limnanthes alba, Linum usitatissimum, Lunaria annua, Lunaria biennis, Oenothera ssp., Ricinus communis and Simmondsia chinensis.

28. (Previously Presented) The process according to claim 16, in which the DNA construct is in a vector.

29. (Previously Presented) The process according to claim 28, in which the vector is a plasmid or a virus.

30. (Previously Presented) The process according to claim 16, in which the

transformation of the plant

cell is carried out by means of Agrobacterium tumefaciens-mediated transformation or a biolytic process comprising a step selected from the group consisting of electrically induced DNA absorption, chemically induced DNA absorption, electroporation, macroinjection, microinjection and PEG-mediated transformation.